2. If the contract has multiple plan sets associated to it, separate the plan set into each individual project and scan with the appropriate title sheet.

#### 1-65.14 As-Built Plans

## 1-65.14.1 Engineer Responsibilities

Upon completion of the project, the project engineer shall submit an electronic as-built plan. Record all changes from the as-let plan that were built into the project in red using Adobe Acrobat Professional or other equivalent software. Do not scan field notes to create the digital as-built plan.

It is critical that the project engineer note all changes as a project progresses. A working as-built copy may be kept and transferred to Adobe at the end of a project or the changes can be recorded directly in Adobe as work on the contract(s) continues. Using either method it is important to work on the as-built while the job is progressing, so changes can be entered while they are still fresh in your mind.

Follow your regions process when submitting the electronic as-built file. Do not password protect the electronic file that is turned into the region.

Note a plan set might come one of three ways:

- 1. One project may be bid as one contract, and there would only be one title sheet for a plan set. This is a whole set and only one as-built shall be completed.
- 2. Several projects may be bid as one contract, and there may be only one title sheet for a plan set. This is a whole set and only one as-built shall be completed.
- 3. Several projects may be bid as one contract but there may be individual plan sets, each with a separate title sheet. If the contract has multiple plan sets separate them and create an as-built for each project.

Use the correct project identification Number (ID) for labeling the as-built pdf file: 1234-56-78AsBuilt.pdf (If there are multiple projects label the file using the lowest project id).

When the project includes structure plans, use the PDF editor tool to copy all structure sheets in section 8 of the plan into a new PDF file named 1234-56-78AsBuiltStructure.pdf, where 1234-56-78 is the primary project ID. Do not remove the structure sheets from the complete as-built. A copy of the title sheet (with all markups) should be inserted as the first page of the newly created structure file. Add the word STRUCTURE in red text on the title sheet above the as-built plan text box.

An as-built should be prepared for all structures that have the following affixes in their structure ID.

- B: Bridges
- C: Culverts
- P: Bridges with no plans (included for 'Rehab' only )
- S: Sign Bridges
- R: Retaining Walls
- M: Miscellaneous
- N: Noise Walls.

It is the responsibility of the project engineer to insert any addendum or replacement sheets into the electronic file with new electronic file sheets. To do this, renumber them similarly to the original plan sheet.

For example, "Revised Sheet 5" would replace sheet 5. However all original sheets shall remain in the as-built. If the sheet has been replaced cross it out with an x and indicate the number of its replacement sheet. If additional sheets were added insert them in the logical location and label them with the previous sheet number followed by an "A", "B", "C", etc.

Note the sheet changes on the title sheet under the ORDER OF SHEETS (see <u>Figure 4</u>: Example As-Built Plan Sheet):

The title sheet of the as-built plan should include the following (see Figure 4: Example As-Built Plan Sheet)

Add a red text box on the title sheet, centered in top margin. Configure the properties as follows.

Font: Arial, Style: Solid, Border Color: Red, Opacity: 100%, Thickness: 1pt, Fill Color: No Color

AS-BUILT PLAN Font size 24

STRUCTURE (if included) Font size 24

SUPERVISOR: Font Size 10

PROJECT ENGINEER: Font Size 10
PROJECT MANAGER: Font Size 10
PRIME CONTRACTOR: Font Size 10
WORK STARTED: Font Size 10
WORK COMPLETED: Font Size 10

# **AS-BUILT PLAN**

SUPERVISOR: Steve Noel

PROJECT MANAGER: Bill Bertrand PROJECT LEADER: John Spielmacher

**CONTRACTOR: Vinton Construction Company** 

WORK STARTED 4/20/11
WORK COMPLETED 9/10/11

For changes or additions to the as-built use *Arial Font 10 and/or line thickness 1pt* unless it requires creative customization. In most cases you will not add a text box because the changes should fit in with the original labeling on the plan. Line out or cross out all changed information and type the corrected information above the original or as close to it where ever possible. Use blank spaces on the plan so notes are not superimposed. Urban plans or those with excessive detail may require an alternate approach. Numbered changes or additions may-be shown on supplemental non-plan sheets.

To indicate other additions, use the clouding tool text box appearance may be changed to this line feature.



If there are no corrections or additions to the as-let put "NO CHANGE" in red text on the title sheet with other required as-built information.

If there is a Right of Way Plat (R/W) included in the plan a note must be added to the first page of Section 4, Sheet No. 4. Quite often the R/W plats are revised after the plan has been completed. The official right-of-way plat information is recorded at the County Register of Deeds Office. For WisDOT's most current information, the R/W Plat can be viewed on DOTView under the Real Estate Project ID. This information is managed by the regional Right of Way Plat Coordinator.

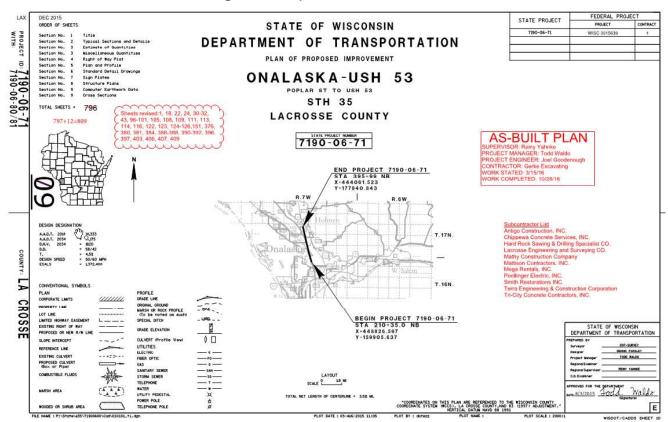
On the first sheet of section number 4, Sheet No. 4 in a blank space where it can be easily read add a red text box including the note: The most current Right of Way information should be viewed in DOTView using the Real Estate Project ID. The Plat information contained in this as-built Plan may not be the final records. Configure the properties as follows. Font: Arial, Style: Solid, Border Color: Red, Opacity: 100%, Thickness: 1pt, Fill Color: No Color, Font size 16

The most current Right of Way information should be viewed in DOTView using the Real Estate Project ID. The Plat information contained in this AsBuilt Plan may not be the final records.

Do not include any of the following changes:

- Miscellaneous Quantities and Estimate of Quantities sheets.
- Every last grade or grade change. Just show the new LC, PC, PI and PT.
- Changes to the right of way sheets.

Figure 4 Example As-Built Plan Title Sheet



## 1-65.14.1.1 Highway Plans

For highway plans include the following notes on the title, plan sheets, and cross section sheets as applicable. Use this listing as a base and revise it to fit the individual project needs.

- Grade changes, changes in elevations for footings, culverts, manholes etc. Just show new LC, PC, PI, and PT.
- Relocated private and field entrances.
- Changes in size and location of culvert pipes.
- Undercut areas.
- Location of drain tiles found under drain tile exploration.
- Omissions, errors and discrepancies discovered during construction.
- Features added, revised, or deleted by contract change orders.
- Corrected or new bench marks. Cross out those that no longer exist.
- Locations of borrow pits common to the mainline.
- Changes to drainage.
- Project reference ties and land ties placed during construction.
- Relocated or added utilities spanning the highway, and those located underground.
- Material type, size, and manufacturer where optional materials are allowed by specifications.
- Final dimensions, elevations, details, sizes, numbers, lengths, locations, etc., if different from the original plan.

## 1-65.14.1.2 Structure Plans

For as-built structure plans include these notes on the title and detail plan sheets as applicable. Consider this listing as a base and revise it to meet individual project needs.

- Add the word STRUCTURE in red text on the title sheet above the as-built plan text box.
- Correct or new bench mark disk locations and elevations.
- Added or relocated utilities. Locate on the plan sheet and on the detail sheet if hanging from the superstructure.
- Changes in piling type.

- Added or relocated piles, location, type and length.
- Expansion joint type when options are allowed. Indicate the size and manufacturer. Cross out reference to joint types not used.
- Revisions, additions and deletions per contract change order.
- Final dimensions, elevations, details, sizes, lengths, numbers and locations if changed from plans.
- Controlling vertical clearances to the highway.
- Plain and protective surface treatment color, type, and manufacturer.
- Size of riprap or other countermeasures to counter scour.
- Underwater problems encountered that may reoccur.
- Top of water elevation together with date taken.
- Vulnerability to scour code obtained from bridge designer.
- Profiles and cross sections of streambed upstream and downstream.
- Angle of water attack relative to pier or abutment line.

## 1-65.14.2 Region Responsibilities

When the as-built and/or structure file is completed, each region may have a slightly different process to transfer the files electronically. Examples include burning to a DVD, copying to the FTP server, or copying to a USB flash drive.

Once received, the as-built plans will be verified by the region record coordinators and processed for access via DOTView. These automated tools also transfer any structure PDF files to the designated BOS location. The electronic as-built in DOTView is WisDOT's official record.

BOS will process the structure plans submitted by the record coordinators. This will make them available to internal and external DOT users by using the Highway Structure Information system (HSI). A WAMS username and password is required to access the HSI system. The link to HSI is:

### https://trust.dot.state.wi.us/hsi/HSIController

Do not submit contracts having more than one project until all projects and/or structure PDF files have been completed.

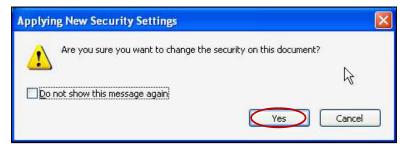
### 1-65.14.3 Bureau Of Project Development Responsibilities

The Bureau of Project Development (BPD) project services section is the custodian of the as-let and as-built data.

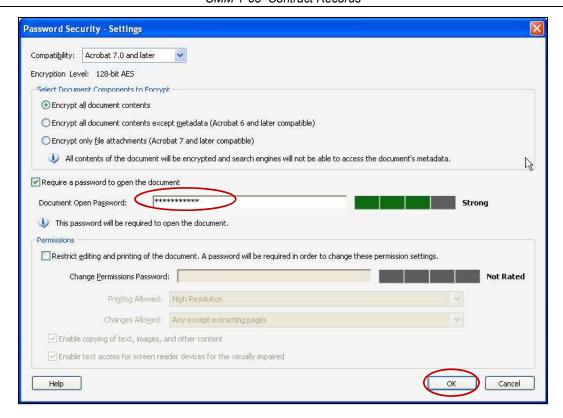
### 1-65.14.4 Local Municipality and/or other As-Built Distribution

If a local municipality or other outside source has an interest in obtaining an as-built prior to processing in DOTView the request shall be routed through the project engineer or regional office contract specialist. Since the as-builts are submitted to the region as unprotected files, the following must be completed to send a protected digital copy to the requestor.

To protect an "AsBuilt" file in Adobe go to the pull-down menu: After Advanced/Security/Password Encryption/ answer "Yes".



After answering "Yes" you will need to configure the Password Security - Settings. In the Permissions area Select the box to "Restrict editing and printing of the document. A password will be required in order to change these permission settings". Use "asbuilt" for the Change Permissions Password.



Configure the security as shown; make sure you indicate that printing is allowed. No changes are allowed but coping of text, images, and other content is. Once you have saved and protected a file, verify that the protection is functioning.